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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,495	03/24/2006	Kazumi Naito	Q77806	9323

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EXAMINER	
CRAWFORD, LATANYA N	

ART UNIT	PAPER NUMBER
2813	

NOTIFICATION DATE	DELIVERY MODE
07/19/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/573,495	NAITO, KAZUMI	
	Examiner	Art Unit	
	LATANYA N. CRAWFORD	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) *1-4 and 22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-21 and 23-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 January 2010* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/2010 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 5-21, 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US 2003/0133256 A1).

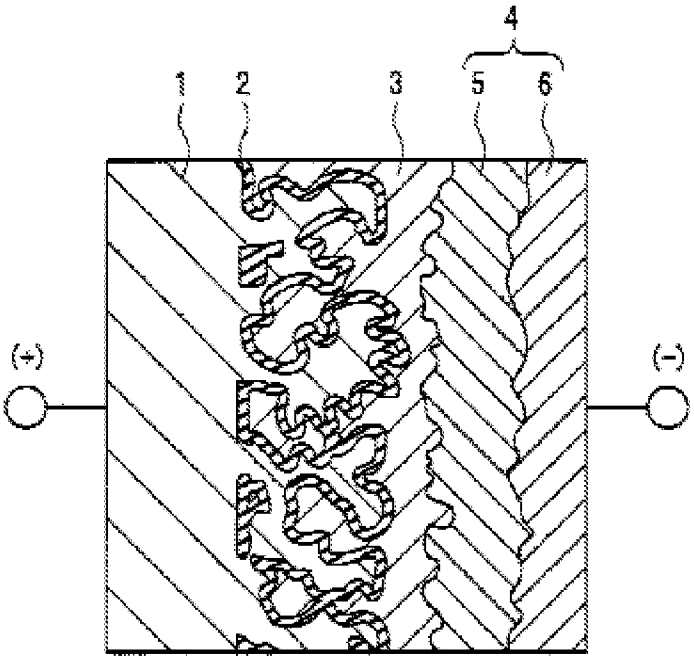


FIG. 1

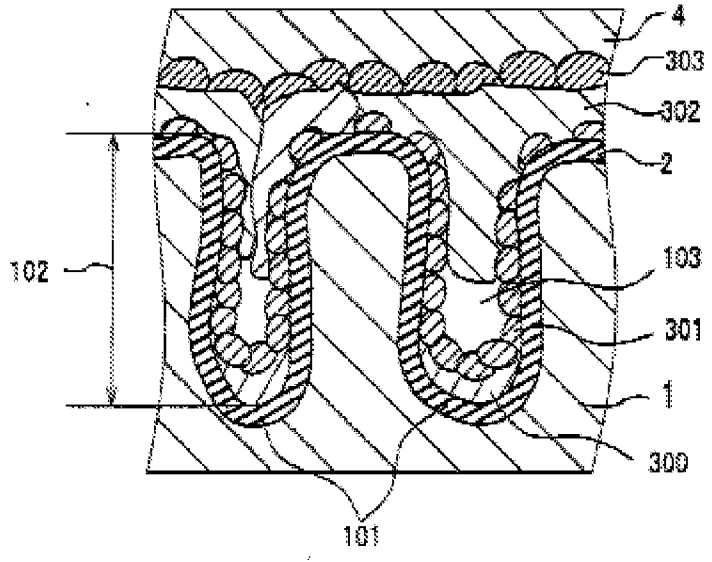


FIG. 2

Regarding claim 20, Yoshida et al. discloses a method for producing a capacitor (fig. 1-2)comprising, as one electrode (1), an electric conductor having formed on the surface thereof a dielectric layer (2)and, as the other part electrode, a semiconductor layer (302) [0039-0041] formed on the electric conductor by energization, which comprises passing an electric current through the electric conductor having formed on the surface thereof the dielectric layer using the electric conductor as a anode [0052] (Examiner notes that the energization process is shown in fig. 3-7 where 10 represents the anode conductor with a dielectric layer thereon immersed in polymerization solution with a power supply (12) present, there is current flow through solution and the anode conductor 10); wherein discrete feather-shaped protrusions are formed on a part of but less than the entire surface of the dielectric layer before energization [0040](A second conductive polymer (302) film is formed by electrolytic polymerization [0040] in view of fig.2, therefore the fine protrusions of film 301 were formed prior to energization of a second energization of polymer film 302 and in view of fig 2 are formed partly on the dielectric layer) but is silent to having a width of about 0.1 to about 120 nm and a height of about 0.1 to about 600 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made that a width of about 0.1 to about 120 nm and a height of about 0.1 to about 600 nm would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1/2), and substantially identical processes, a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 21, Yoshida et al. discloses a method for producing a capacitor (fig. 1-2)comprising, as one electrode, an electric conductor (1) having formed on the surface thereof a dielectric layer (2) and, as the other part electrode, a semiconductor layer (302) [0039-0041] formed on the electric conductor by energization, which comprises passing an electric current through the electric conductor having formed on the surface thereof the dielectric layer using the electric conductor as a anode [0052] (Examiner notes that the energization process is shown in fig. 3-7 where 10 represents the anode conductor with a dielectric layer thereon immersed in polymerization solution with a power supply (12) present, there is current flow through solution and the anode conductor 10), wherein discrete fine protrusions having are formed on a part of but less than the entire surface of the dielectric layer before energization](A second conductive polymer (302) film is formed by electrolytic polymerization [0040] in view of fig.2, therefore the fine protrusions of film 301 were formed prior to energization of a second energization of polymer film 302 and in view of fig 2 are formed partly on the dielectric layer), said electric conductor (1) having inner pores (101) formed therein, and wherein a majority of the fine protrusions (301) overlay an outer surface of the dielectric layer (2) or overlay an outer surface of the dielectric layer and an inner pore surface of the electric conductor (fig. 2 [0040] but fails to teach having a width of fine protrusions having a width 0.1 to 60 nm and protrusions within 10 μm from the outer surface of the dielectric layer. It would have been obvious to one of ordinary skill in the art at the time the invention was made that having a width of 0.1to 60 nm & protrusions within 10 μm from the outer surface of the dielectric layer would result since Yoshida et al. teaches

substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1), and substantially identical processes, a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 5, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the fine protrusion is at least one member selected from a metal oxide [0038-0039].

Regarding claim 6, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the electric conductor is at least one member selected from a metal [0035].

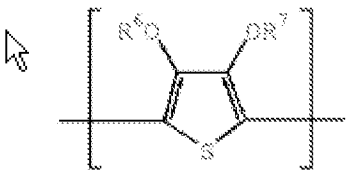
Regarding claim 7, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the electric conductor (1) is a laminated body having, as the surface layer, at least one member selected from an organic semiconductor and carbon (5/6) [0049] fig. 1/2

Regarding claim 8, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the dielectric layer mainly comprises at least one member selected from metal oxides such as Ta_20_5[0059]

Regarding claim 9, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the semiconductor layer (3) is at least one member selected from an organic semiconductor layer and inorganic semiconductor [0038].

Regarding claim 10, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 9, wherein the organic semiconductor is at least one member selected from an organic semiconductor comprising an organic semiconductor mainly comprising tetracyano-quinodimethane [0038]

Regarding claim 11, Yoshida et al. discloses The method for producing a capacitor as claimed in claim 10, wherein the electrically conducting polymer containing a repeating unit represented by formula (1) is an electrically conducting polymer containing a structure unit represented by the following formula (3) as a repeating unit:



(3)

wherein R6 and R7 each independently represents a hydrogen atom, a linear or branched, saturated or unsaturated alkyl group having from 1 to 6 carbon atoms, or a substituent for forming at least one 5-, 6- or 7-membered saturated hydrocarbon cyclic structure containing two oxygen atoms when the alkyl groups are combined with each other at an arbitrary position, and the cyclic structure includes a structure having a vinylene bond which may be substituted, and a phenylene structure which may be substituted [0004].

Regarding claim 12, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 10, wherein the electrically conducting polymer is selected from polypyrrole [0004].

Regarding claim 13, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 11, wherein the electrically conducting polymer is poly(3,4-ethylenedioxythiophene) [0004].

Regarding claim 14, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 9, wherein the inorganic semiconductor is at least one compound selected manganese dioxide [0038].

Regarding claim 15, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 9, wherein the electrical conductivity of the semiconductor is from 10^{-2} to 10^{3} S/cm [0004][0038].

Regarding claim 16, Yoshida et al. discloses a capacitor produced by the production method claimed in claim 20 or 21 (in view of fig. 1).

Regarding claim 17, Yoshida et al teaches a capacitor produced as in claim 16 but is silent to the impregnation ratio of the semiconductor is 85% or more. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the impregnation ratio of the semiconductor is 85% or more would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1/2), and substantially identical processes (in view of rejection for claim 20 and 21) a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 18, Yoshida et al. discloses an electronic circuit using the capacitor claimed in claim 16 (in view of fig. 1) [0002].

Regarding claim 19, Yoshida et al. discloses an electronic device using the capacitor claimed in claim 16 (in view of fig. 1)[0002].

Regarding claim 23, Yoshida et al. discloses a capacitor produced as in claim 21 but is silent to wherein 80% or more of the fine protrusions overlay an outer surface of the dielectric layer. It would have been obvious to one of ordinary skill in the art at the time the invention was made that 80% or more of the fine protrusions overlay an outer surface of the dielectric layer would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1/2), and substantially identical processes (in view of rejection for 21) a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 24, Yoshida et al. discloses wherein the fine protrusion is at least member selected a transition element-containing inorganic compound and a transition element-containing organic compound [0039] (manganese dioxide conductive film; protrusions are formed by using the conductive film 300)

Regarding claim 25, Yoshida et al the method for producing a capacitor as claimed in claim 20 or 21, which comprises electrolytically forming the fine protrusions on the dielectric layer (2) [0036] in view of fig. 1/2.

Regarding claim 26, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20, wherein the discrete feather-shaped fine protrusions (in view of fig. 1) but is silent to having a width of about 0.1 to about 60 nm and a height of about 0.1 to about 120 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made that a width of about 0.1 to about 60 nm and a height of about 0.1 to about 120 nm would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1/2), and substantially identical processes (in view of rejection for claim 20) a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 27, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 21, wherein the discrete fine protrusions (in view of fig. 1) but is silent to having a width of 0.1 to 30 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made that a width of 0.1 to 30 nm would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1/2), and substantially identical processes (in view of rejection for claim 21) a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Response to Arguments

4. Applicant's arguments filed 12/20/2010 have been fully considered but they are not persuasive. Applicant has not claimed the structural difference between applicant's

invention and Yoshida. Yoshida et al. teaches that the electric conductor is used as an anode (10) [0052]. The claim does not distinguish between the anode of Yoshida and the anode of applicant's invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LATANYA N. CRAWFORD whose telephone number is (571)270-3208. The examiner can normally be reached on Monday-Friday 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Landau can be reached on (571)-272-1731. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LATANYA N CRAWFORD/

Examiner, Art Unit 2813